

**IN THE ABSTRACT:**

Please replace the abstract with the following:

A computer system for processing stack-based instructions using the data drive principle is presented. The system comprises a register file, an advanced pointer stack, a completed pointer stack, a data buffer, an instruction buffer, and means for executing operations involved in issued instructions out of order. The register file has entries each designed to be able to hold a word of data. The advanced/completed pointer stack has entries each designed to be able to hold a register-file-entry address and, in combination with the register file, is to virtually configure uppermost part of the operand stack grounded on all the issued/completed instructions. The data buffer has entries each designed to be able to hold a word of data and can hold lower operand-stack elements. The instruction buffer is a FIFO queue for holding substances of issued instructions.